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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------|------------------|
| 09/918,645  | 08/01/2001  | Yasuhiko Kojima      | 08038.0052                    | 2654             |
| 7590 12/11/2003<br>Finnegan, Henderson, Farabow<br>Garrett & Dunner, L.L.P.<br>1300 I Street, N.W.<br>Washington, DC 20005-3315 |             |                      | EXAMINER<br>BUEKER, RICHARD R |                  |
|   |             |                      | ART UNIT<br>1763              | PAPER NUMBER     |

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/918,645             | KOJIMA ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Richard Bueker         | 1763                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 1-4, 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5 and 8-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1201</u> . | 6) <input type="checkbox"/> Other: _____                                    |

The following typographical errors in the specification should be corrected:  
At page 6, line 32, "5a" should be changed to "5b". At page 11, line 34, "Fig. 2" should be changed to "Fig. 1".

Claims 8-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In newly added claim 8, the phrase "a purging device" was not contained in the specification as originally filed, and is therefore considered to be new matter.

Claims 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The scope of the phrase "a purging device" in claim 8 is unclear. Is it intended to refer to the source of "stabilizer" 5 or a source of inert gas such as carrier gas source 4 of Fig. 1?

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: If for argument's sake the phrase "a purging device" in claim 8 were not considered to be new matter, it would still be objectionable because it lacks proper antecedent basis in the specification.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 8-12 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schmitt (6,179,925). Schmitt (see Figs. 1, 2 and 4A) discloses a gas phase growth system comprising a CVD reaction chamber for holding a substrate to be processed, a vaporizer 140 that vaporizes a CVD precursor such as an organometallic complex such as Cu(hfac)TMVS, a gas line 142 communicating the vaporizer with the reaction chamber, and a stabilizer feeder 600 that feeds stabilizer such as TMVS in a gaseous state to the precursor supply system. Schmitt suggests connecting the stabilizer feeder line 206 (Fig. 2 of Schmitt) to the liquid precursor supply line upstream of the vaporizer 140, and also connecting the stabilizer feeder line 210 (Fig. 2) to the vaporizer 140. Both of these stabilizer feeder supply lines are inherently or at least obviously capable of feeding gaseous TMVS stabilizer into the gas area of the vaporizer and/or the gas line 142. Regarding the purging device recited in claim 8, it is noted that Schmitt teaches the use of a pressure control unit 104 (vacuum pump) to evacuate the contents of his reaction chamber and also his gas line 142 (see col. 4, lines 43-50). Schmitt teaches that the pressure control unit 104 purges the system, and it is therefore inherently "a purging

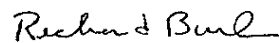
device". Also, the purge additive delivery system 600 of Schmitt can be considered a purging device. The limitations of claims 9-11 relating to the timing of the stabilizer feeding step are process limitations, which the apparatus of Schmitt are inherently capable of performing. It is noted also that Schmitt teaches (see Fig. 4A, elements 408 and 410) the step of introducing the TMVS stabilizer during a time that the organometallic precursor is not being introduced.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yuuki (5,776,254) is the U.S. patent counterpart to JP 08-176826 cited by applicants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (703) 308-1895. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
Richard Bueker  
Primary Examiner  
Art Unit 1763